

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/078244 A2

(51) International Patent Classification⁷: **F01L**

[JP/JP]; c/o Honda R & D Co., Ltd., 4-1, Chuo 1-chome, Wako-shi, Saitama 3510193 (JP).

(21) International Application Number:
PCT/JP2005/002965

(74) Agents: **OGURI, Shohei** et al.; Eikoh Patent Office, 13th Floor, ARK Mori Building, 12-32, Akasaka 1-chome, Minato-ku, Tokyo 1076013 (JP).

(22) International Filing Date: 17 February 2005 (17.02.2005)

(25) Filing Language: English

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
2004-040247 17 February 2004 (17.02.2004) JP
2004-040246 17 February 2004 (17.02.2004) JP

(71) Applicant (for all designated States except US): **HONDA MOTOR CO., LTD.** [JP/JP]; 1-1, Minami-Aoyama 2-chome, Minato-ku, Tokyo 1078556 (JP).

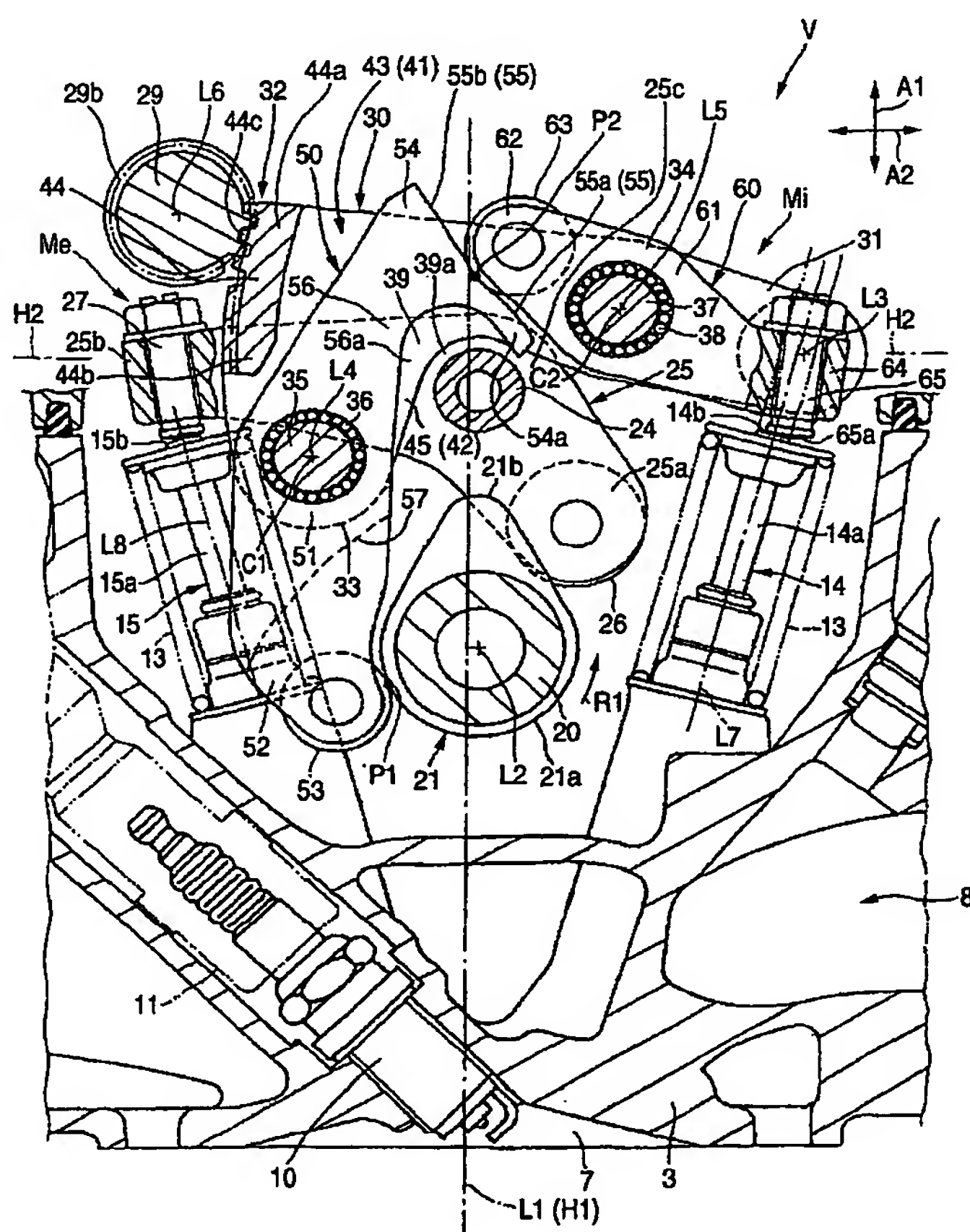
(72) Inventor; and

(75) Inventor/Applicant (for US only): **TASHIRO, Masahiko**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: VALVE TRAIN FOR INTERNAL COMBUSTION ENGINE



(57) Abstract: A valve train includes a primary rocker arm 50 oscillating about a primary oscillating center line L4 in response to the rotation of an inlet cam 21, a secondary rocker arm 60 oscillating about a secondary oscillating center line L5 so as to transmit a valve drive force via the primary rocker arm 50 to the inlet valve 14 and a holder 30 which supports the primary and secondary rocker arms 50, 60 in an oscillatory fashion in such a manner that the primary and secondary oscillating center lines L4, L5 oscillate together. A cam profile 55 has a lost motion profile 55a a drive profile 55b are formed on an abutment portion 54 of the primary rocker arm 50. A sectional shape of the lost motion profile 55a is an arc-like shape which is formed about the primary oscillating center line L4.

WO 2005/078244 A2